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Five New Species of the Genus *Nepalota* (Coleoptera, Staphylinidae, Aleocharinae) from Japan

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Abstract Five Japanese species of *Nepalota* Pace, 1987, an Eastern Palaearctic genus previously unknown from Japan, are described, illustrated, keyed, and distinguished from their congeners: *Nepalota angusticavata* sp. nov., *N. kyushuica* sp. nov., *N. laticavata* sp. nov., *N. rectisulcata* sp. nov., and *N. naomii* sp. nov. The genus now includes a total of 13 species from Nepal, China, and Japan. The synapomorphic male secondary sexual characters, as well as other similarities suggest that the Japanese representatives of the genus form a monophyletic group. The known distributions of the *Nepalota* species of Japan are mapped.

Key words: Coleoptera, Staphylinidae, Aleocharinae, Athetini, *Nepalota*, Palaearctic region, Japan, taxonomy, description, new species, distribution.

Introduction

The athetine genus *Nepalota* was described by Pace (1987a) — and again by Pace (1987b) — to accommodate three new species from Nepal, the designated type species *N. franzi* from western Nepal, as well as *N. fessa* and *N. martensi* from central Nepal. According to the very short original description, the genus is highly similar to *Acrotona* Thomson, even shares the morphology of the mouthparts, but is distinguished by the deeply bifid median lobe of the aedeagus and by the shape of the spermatheca. Up to today, five more species have been described, all of them from China (Pace, 1998), and a Chinese locality of *N. martensi* was reported by Pace (1993).

Aleocharine material kindly sent to me for examination by Munetoshi Maruyama, Sapporo, included numerous specimens of *Nepalota* from Japan, from where the genus had previously been unknown. The specimens were found to belong to five species, so that the genus now comprises a total of thirteen species.

Material

The material referred to below is deposited in the following collections:

CBM Natural History Museum and Institute, Chiba
NSMT National Science Museum, Tokyo
cAss private collection V. Assing, Hannover
cMar private collection M. Maruyama, Sapporo
cNao private collection S.-I. Naomi, Chiba

The spelling and format of the geographic data indicated on the paratype labels are corrected and standardized, respectively.

The Japanese Species of *Nepalota*

As is suggested by the striking overall morphological similarity and especially by the evidently synapomorphic morphology of the male secondary sexual characters, the Japanese representatives of the genus form a monophyletic group. In order to facilitate recognition, a diagnosis of the species-group occurring in Japan is provided:

Species of moderately large size (approx. 4.5–5.8 mm), in general facies somewhat reminding of an over-sized *Acrotona* species with slender pronotum (e.g., *A. oxypodoides* (Brundin)) or of *Callicerus rigidicornis* (Erichson) (Figs. 1, 11,

21, 29, 37).

Head transverse, subtriangular, widest behind eyes; posteriorly distinctly margined, but not constricted; posterior angles rounded, weakly marked; eyes moderately large, weakly prominent, shorter than postocular region in dorsal view; frontal suture absent. Pubescence moderately long, suberect to depressed, in central dorsal area directed predominantly diagonally antero-mediad or anteriad. Puncturation fine, not conspicuous. Genal carinae present; gular sutures widely separated; submentum and mentum with moderately numerous pseudopores. Maxillary palpus 4-jointed, very slender, third joint at least three times as long as wide; labial palpi 3-jointed; ligula long and slender, apical half bifid; for an illustration of the labium see Pace (1987a). Labrum weakly transverse, anteriorly truncate. Right mandible with distinct tooth.

Antennae long and massive, apically not distinctly incrassate; antennomeres I–III oblong and of subequal length, antennomere I somewhat flattened (i.e., more or less oval in cross-section), IV–X not or only indistinctly transverse, weakly increasing in width, and XI approximately as long as the combined length of IX and X.

Pronotum moderately transverse and distinctly wider than head; dorsal aspect with or without distinct sexual dimorphism; maximal width in anterior half; lateral margins not sinuate near posterior angles, the latter obtuse, but well-defined. Pubescence suberect, directed cephalad along anterior half of midline, caudad along posterior half of midline, and predominantly diagonally latero-caudad in lateral parts of pronotum; puncturation relatively fine, not conspicuous. Hypomera in lateral view distinctly visible; prosternum with median carina, without acute median process.

Elytra slightly wider and at suture somewhat shorter than pronotum; posterior margin shallowly sinuate near external posterior angles; pubescence depressed, less distinct, shorter and finer than that of pronotum; puncturation not conspicuous; hind wings fully developed. Mesosternum without median carina, mesosternal process long and acute, reaching approximately halfway between mesocoxae; mesocoxal cavities posteriorly and laterally delimited from metasternum by distinct carina.

Legs of the usual athetine morphology; metatarsomeres relatively long, metatarsomere I distinctly longer than II, almost as long as the combined length of II and III. Tarsal fomula: 4, 5, 5.

Abdomen weakly tapering posteriad; integument with much weaker microsculpture and clearly more shine than forebody; tergites VI and VII with much sparser puncturation than tergites III–V; tergites III–V with shallow anterior impressions; tergites III and often also IV with sexual dimorphism; tergites III–V with shallow impunctate anterior impressions; posterior margin of tergite VII with palisade fringe; puncturation of tergite VII slightly or distinctly sparser than that of anterior tergites; tergite VIII with sexual dimorphism; tergum X in posterior median area without, anteriorly and laterally with dense and long pubescence.

♂: pronotum often with extensive or narrow median impression, which may be more or less reduced; abdominal tergite III in posterior half with rather conspicuous, distinctly elevated tubercle directed obliquely dorso-cephalad (Figs. 2, 12, 22, 23, 30, 38, 39); tergite IV with anterior margin of anterior transverse impression often distinctly angulate (V-shaped) in the middle; tergite VII in posterior half with large oblong, moderately elevated, median tubercle (Fig. 40); surface of this tubercle with distinct microsculpture and matt; posterior margin of tergite VIII at least weakly serrate (Figs. 7, 18, 27, 34, 44); sternite VIII shorter and broader than in ♀, posteriorly strongly convex and with sparse short marginal setae (Figs. 8, 19, 28, 35, 45); median lobe of aedeagus highly distinctive, its ventral process deeply bifid (Figs. 3, 4, 13–16, 24, 25, 31, 32, 41, 42); apical lobe of paramere narrowly subtriangular (Fig. 5).

♀: pronotum and anterior abdominal tergites unmodified; tergite III posteriorly not serrate; tergite VIII posteriorly strongly convex, not serrate

(Figs. 9, 46); sternite VIII longer and more slender than in ♂, with numerous long black setae, its posterior margin strongly convex, with short marginal setae, and with micropubescence (Figs. 10, 20, 36, 47). Spermatheca with relatively short and proximally twisted duct (Figs. 6, 17, 26, 33, 43).

Systematics and Comparative Notes

In some external characters (general facies, shape of head, pubescence, long metatarsi), *Nepalota* is similar to *Acrotona* Thomson. In the absence of a comprehensive phylogenetic synopsis of the Athetini, however, the phylogenetic affiliations of both genera are difficult to assess. A deeply bifid ventral process of the median lobe has been regarded by some authors as a significant character for the systematics of Athetini, but recent studies have shown that it is widespread among aleocharines and has probably evolved independently on numerous occasions (Assing, 2002a, b). *Paraloconota* Cameron and *Emmelostiba* Pace, two genera with a similarly bifid aedeagus, differ in so many other characters from *Nepalota* that a close relationship is most unlikely.

Based on the details and the illustrations provided by Pace (1987a, b, 1998) and of material of three species seen from China, the Japanese species are most similar to *Nepalota martensi* Pace and *N. chinensis* Pace, apparently the only representatives occurring outside Japan with a similarly modified male tergite VII. However, the species-group occurring in Japan is characterized by a distinctly and obliquely elevated tooth-like tubercle on the male tergite III, this tubercle projecting over the posterior margin of tergite III. Two Nepalese species and *N. chinensis*, also, have a tubercle on the male tergite III, but in the former it is situated in the middle of the tergite, smaller, and not projecting over the posterior margin of the tergite and in the latter it is much more slender and apically more acute. With one exception, the Japanese species are additionally characterized by a modified male tergite IV, whose anterior impression is delimited by an angulate (V-shaped) anterior margin. In *N. chinensis*, apparently the only other species with a similarly modified tergite IV, this impression is much more weakly angulate.

Among the Japanese Athetini, the species group of *Nepalota* dealt with here is identified by the following character combination: large body size, the rather long, massive, and apically indistinctly incrassate antennomeres, very slender preapical joint of the maxillary palpus, the pronotal pubescence pattern, the long metatarsomeres with metatarsomere I distinctly longer than II, and especially by the highly distinctive modifications of the ♂ abdominal tergites III and IV and by the morphology of the aedeagus.

Considering the relatively large size and the presence of rather conspicuous secondary sexual characters, the low character divergence among Japanese *Nepalota* seems remarkable. Not a single non-sexual character allowing a reliable identification of any of the species was found.

Distribution and Bionomics

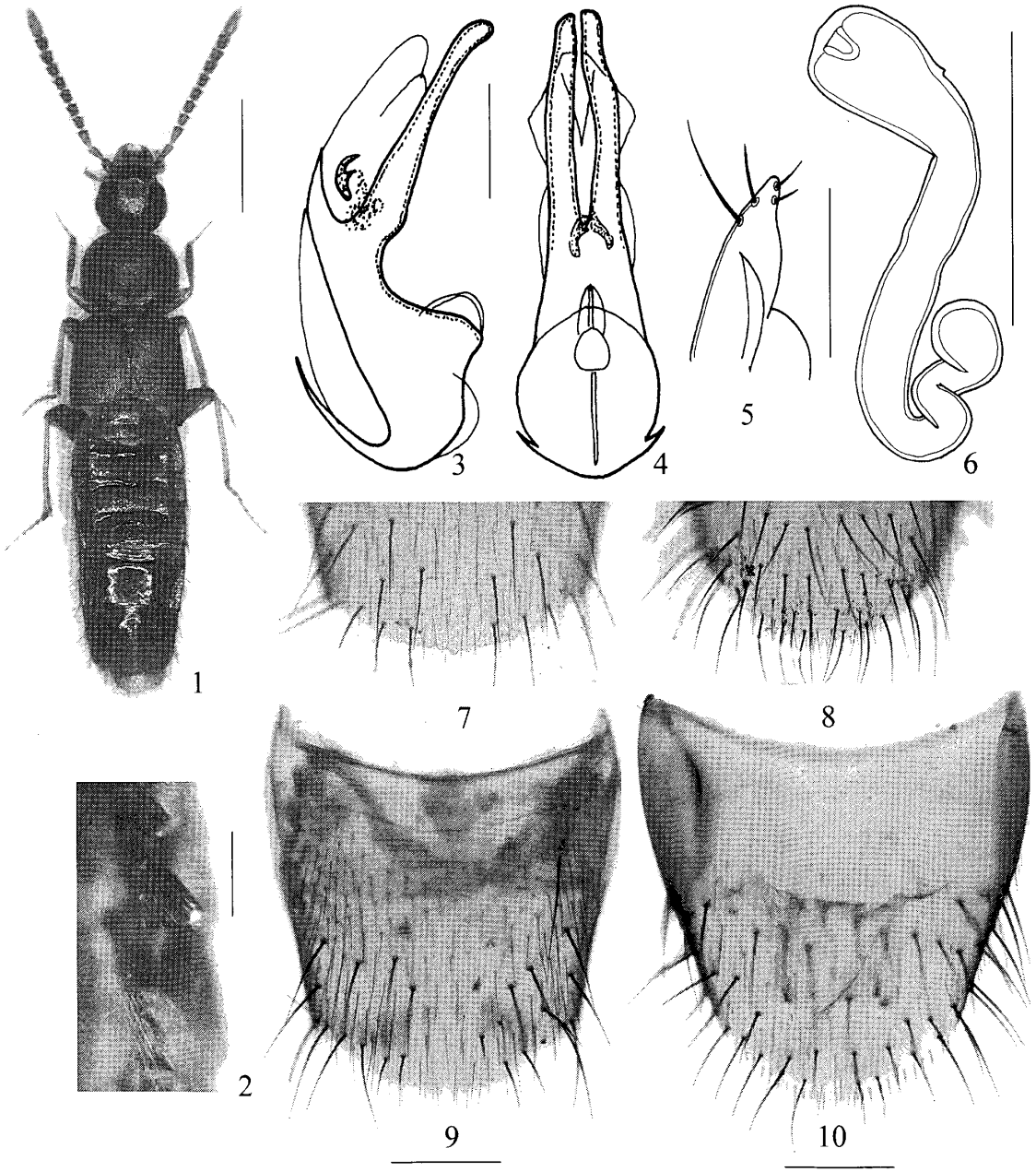
The genus apparently has an Eastern Palaearctic distribution and is currently known from Nepal, China and Japan, but possibly more widespread in the Eastern Palaearctic region. Taking into consideration that only a few samples have been examined, that most of the Japanese species are known only from one locality, and that the well-developed wings permit long-distance dispersal, it seems safe to assume that the *Nepalota* from Japan are much more widespread and more diverse than is currently known. The respective circumstances of collection suggest that at least the Japanese species and three species from China inhabit the leaf litter of woodland habitats (Maruyama, pers. comm.; Schülke, pers. comm.).

Nepalota angusticavata sp. nov.

(Figs. 1–10, Map 1)

Type series. Holotype ♂: "Omogokei, Ehime-pref. [=Omogokei, Omogo-mura,

Kamiukena-gun, Ehime-ken], 15–VI–1981, S. Naomi leg." / "Holotypus ♂ *Nepalota angusticavata* sp. nov. det. V. Assing 2003" (NSMT). Paratypes: Honshu: 3♂♂, 5♀♀: Mizukizawa (1,300 m, alt.), Kiso-mura, Nagano-ken, Honshu, 4–VIII–1997, S. Nomura leg. (cMar, cAss); 3♂♂, 4♀♀: Nomugi-tôge (1,600 m), Nagawa-mura, Nagano-ken, 4–VIII–1997, S. Nomura leg. (cMar, cAss); 1♂: Onzui-keikoku, Onzui-mura, Hyôgo-ken, 6–VI–1984, S. Nomura leg. (cNao); 1♂, Urahikimikyô, Hikimi-chô, Shimane-ken, 7–VI–1988, S. Nomura leg. (cAss); 2♂♂: Sandankyô, Togouchi-chô, Hiroshima-ken, 28–VI–1985, S. Nomura leg. (cNao, cAss); 1♂: Hosomidani, Yoshiwa-mura, Hiroshima-ken, 7–VI–1987, S. Nomura leg. (cAss); 1♂ [teneral]: Yoshiwa-mura, Aki-gun, Hiroshima-ken, 8–VI–1987, S. Nomura leg. (cNao); 1♀: Takao-san, Hachiôji-



Figs. 1–10. *Nepalota angusticavata* sp. nov.: facies, ♂ (1); ♂ abdominal tergites III and IV in lateral view (2); median lobe of aedeagus in lateral and in ventral view (3, 4); apical lobe of paramere (5); spermatheca (6); posterior part of ♂ tergite VIII (7); posterior part of ♂ sternite VIII (8); ♀ tergite VIII (9); ♀ sternite VIII (10). Scales: 1: 1.0 mm; 2–10: 0.2 mm.

shi, Tokyo-to, 24–VI–1979, M. Tao leg. (cNao). Shikoku: 46♂♂, 40♀♀ [some exs. teneral]: same data as holotype (cNao, cAss); 1♂: Ishizuchi-san (1,700 m, alt.), Saijô-shi, Ehime-ken, 10–X–1990, S. Nomura leg. (cAss). (Paratypes originally from the Naomi collection are also deposited in the CBM.)

Description. 4.5–5.5 mm. Head brown to blackish brown, usually dark brown; pronotum brown to dark brown, usually slightly lighter than head; elytra light brown or yellowish brown; abdomen of similar colour to pronotum, with the anterior parts of tergites III–VII somewhat infuscate; legs and palpi yellowish brown; antennae brown with the basal antennomeres slightly lighter. Facies as in Fig. 1.

Head 1.15–1.20 times as wide as long (length measured from anterior margin of clypeus to posterior margin of head), somewhat wedge-shaped (i.e., dilated posteriad), maximal width behind eyes; eyes in dorsal view slightly shorter than postocular region, weakly protruding from lateral outline of head; integument with distinct microreticulation and fine, moderately sparse, often barely noticeable puncturation; dorsally without impressions; antennae not distinctive.

Pronotum 1.30–1.35 times as wide as head and 1.20–1.25 times as wide as long; maximal width in anterior half, immediately behind anterior angles; posterior angles obtuse; posterior margin broadly convex; microreticulation similar to that of head; puncturation very dense, much denser than that of head, often weakly granulose.

Elytra slightly (1.10–1.15×) wider than pronotum and at suture 0.75–0.80 times as long as pronotum; posterior margin weakly sinuate near external angle; puncturation very dense, often even denser and more distinctly granulose than that of pronotum; microreticulation pronounced.

Abdomen approximately as wide as elytra, widest at segment IV; integument with very shallow, often barely noticeable transverse microsculpture and shining; puncturation on tergites III–V moderately sparse and fine, on posterior tergites very sparse; posterior margin of tergite VII with palisade fringe.

♂: pronotum usually with more or less extensive median impression of rather variable width and depth; tergite III in posterior half with distinct and erect, apically rounded median tubercle (Fig. 2); tergite IV with anterior carina of anterior impression distinctly pointed (V-shaped) in the middle; median elevation of tergite VII relatively small, but on the whole not distinctive; tergite VIII with weakly serrate posterior margin (Fig. 7); sternite VIII posteriorly distinctly convex (Fig. 8); median lobe of aedeagus as in Figs. 3, 4, in lateral view at base of ventral process with distinct, but not very broad excavation; apical lobe of paramere as in Fig. 5.

♀: pronotum and tergites III, IV, and VII unmodified; tergite and sternite VIII posteriorly weakly convex (Figs. 9–10); spermatheca as in Fig. 6.

Comparative notes. From other species of the genus, *N. angusticavata* is distinguished especially by the lateral aspect of the median lobe of the aedeagus. In addition, it is characterized by a relatively less transverse pronotum than in the other species and separated from *N. rectisulcata* by the modified male abdominal tergite IV.

Etymology. The name (Lat., adj.: narrowly excavated) refers to the shape of the lateral aspect of the aedeagus.

Distribution and bionomics. Nepalota angusticavata is known from several localities in Honshu and Shikoku (Map 1). Part of the specimens collected in June are teneral. The species was found at altitudes of up to 1,700 m.

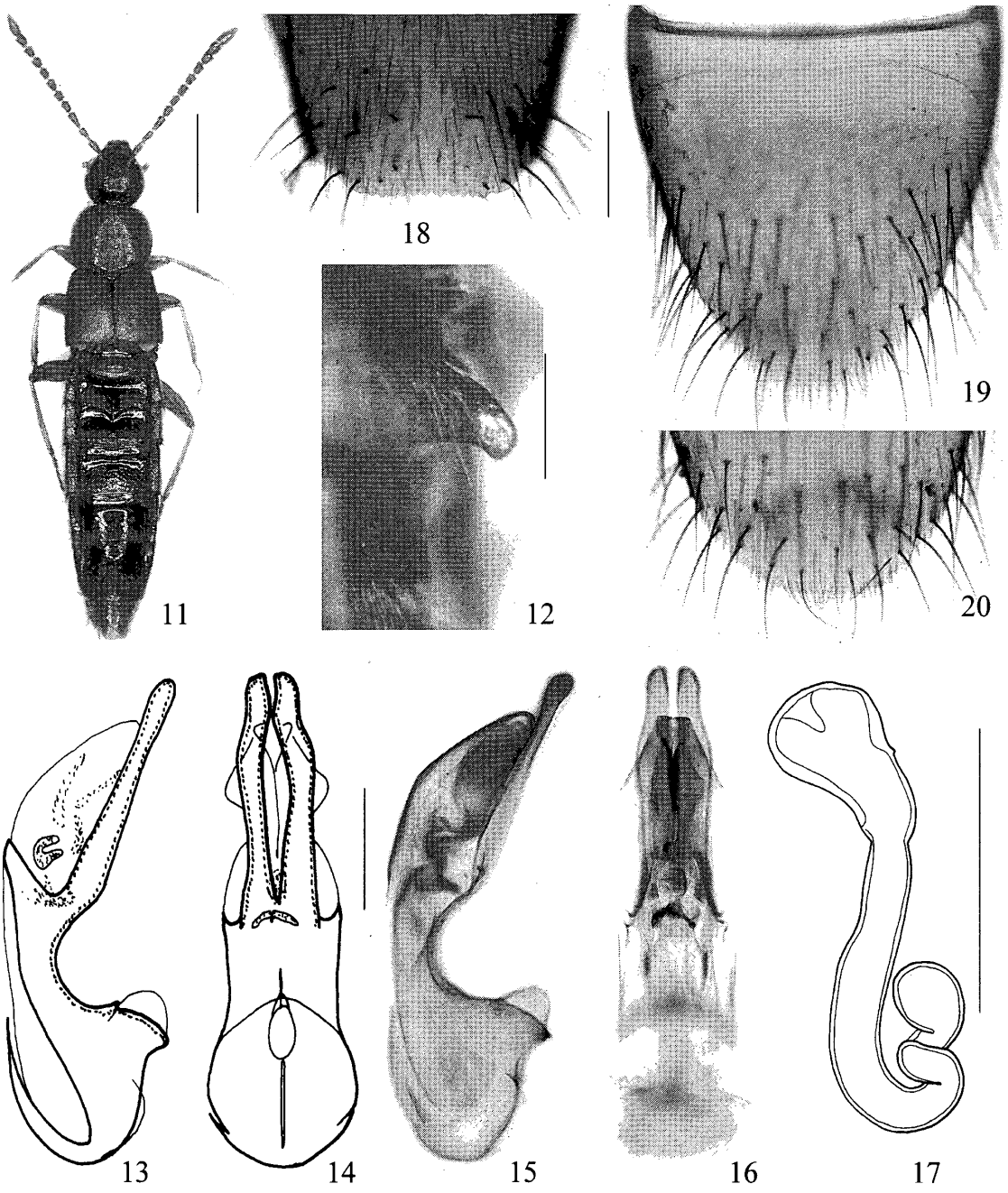
Nepalota kyushuica sp. nov.

(Figs. 11–20, Map 1)

Type series. Holotype ♂: "Kikuchi-dani [=Kukuchi-keikoku], Kikuchi-shi, Kumamoto-ken, JAPAN, 17–V–1997, Shûhei Nomura leg."/ "Holotypus ♂ *Nepalota kyushuica* sp. n. det. V. Assing 2003" (NSMT). Paratypes: Kyushu: 2♂♂, 1♀: same data as holotype (cMar, cAss); 2♂♂, 7♀♀: Kuro-dake, Kujû-renzan, Ôita-ken, 16–IX–1985, S. Nomura leg. (cNao, cAss); 6♂♂, 1♀: same locality and collector, 15–IX–1995 (cNao,

cAss); 8♂♂, 11♀♀: Taisen-zan, Kujû-renzan, Ôita-ken, 5–VI–1993, S. Nomura leg. (cNao, cAss); 4♂♂, 8♀♀ [1♀ with mature egg in ovaries]: Gozen-dake (800 m, alt.), Maetsue-mura, Ôita-ken, 25–IX–1994, S. Nomura leg. (cMar, cAss). (Paratypes originally from the Naomi collection are also deposited in the CBM.)

Description. Extremely similar to *N. angusticavata* (Fig. 11), distinguished only by the primary and secondary sexual characters: ♂: tergite III posteriorly with more elevated posterior margin; tubercle of tergite III more pronounced, longer and apically obliquely truncate (Fig. 12); tergite VIII with weakly serrate, distinctly truncate posterior margin (Fig. 18); sternite VIII similar to



Figs. 11–20. *Nepalota kyushuica* sp. nov.: facies, ♂ (11); ♂ abdominal tergites III and IV in lateral view (12); median lobe of aedeagus in lateral and in ventral view (13–16); spermatheca (17); posterior part of ♂ tergite VIII (18); ♂ sternite VIII (19); posterior part of ♀ sternite VIII (20). Scales: 11: 1.0 mm; 12–20: 0.2 mm.

that of *N. angusticavata* (Fig. 19); median lobe of aedeagus as in Figs. 13–16, in lateral view at base of ventral process with more pronounced and wider excavation than in *N. angusticavata*.

♀: tergite and sternite VIII posteriorly weakly convex (Fig. 20); spermatheca as in Fig. 17.

Comparative notes. From other species of the genus, *N. kyushuica* is distinguished especially by the lateral aspect of the median lobe of the aedeagus. In addition, it is characterized by the shape of the tubercle (lateral aspect) of the male tergite III.

Etymology. The name (Lat., adj.) alludes to the fact that the species is known only from Kyushu.

Distribution and bionomics. Nepalota kyushuica is known from several localities in Kyushu (Map 1); one dissected female collected in September had a mature egg in the ovaries.

Nepalota laticavata sp. nov.

(Figs. 21–28, Map 1)

Type series. Holotype ♂: "Wasamata-yama, Kamikitayama-mura, Nara-ken, Japan, 11–VII–1999, M. Maruyama leg." / "Holotypus ♂ *Nepalota laticavata* sp. n. det. V. Assing 2003" (NSMT). Paratypes: Honshu: 9♂♂, 13♀♀: same data as holotype (cMar, cAss); 2♂♂, 3♀♀, 1 ex. [partly teneral]: Ôdaigahara, Nara-ken, 25~26–VI–1981, S. Naomi leg. (cNao, cAss). (Paratypes originally from the Naomi collection are also deposited in the CBM.)

Description. Externally highly similar to *N. angusticavata* (Fig. 21) but distinguished as follows:

Slightly larger, 4.7–5.8 mm, and on average a little darker; usually with dark brown pronotum and dark brown to blackish brown antennomeres IV–XI. Elytra relatively longer and wider, approximately 1.20 times as wide and at suture about 0.85 times as long as pronotum.

♂: secondary sexual characters similar to those of *N. angusticavata*, but the tubercle of tergite III more pronounced (Figs. 22–23); posterior margin of tergite VIII more distinctly serrate (Fig. 27); median lobe of aedeagus larger and in lateral view much more broadly excavate (Figs. 24–25).

♀: tergite and sternite VIII shaped as in *N. angusticavata*; spermatheca as in Fig. 26.

Comparative notes. From other species of the genus, *N. laticavata* is distinguished especially by the lateral aspect of the median lobe of the aedeagus. In addition, it is characterized by its darker average coloration and separated from *N. rectisulcata* by the modified male abdominal tergite IV.

Etymology. The name (Lat., adj.: broadly excavated) refers to the distinctive shape of the lateral aspect of the aedeagus.

Distribution and bionomics. Nepalota laticavata is known from two localities in Honshu (Map 1). Part of the specimens collected in June are teneral. The species was collected from leaf litter.

Nepalota rectisulcata sp. nov.

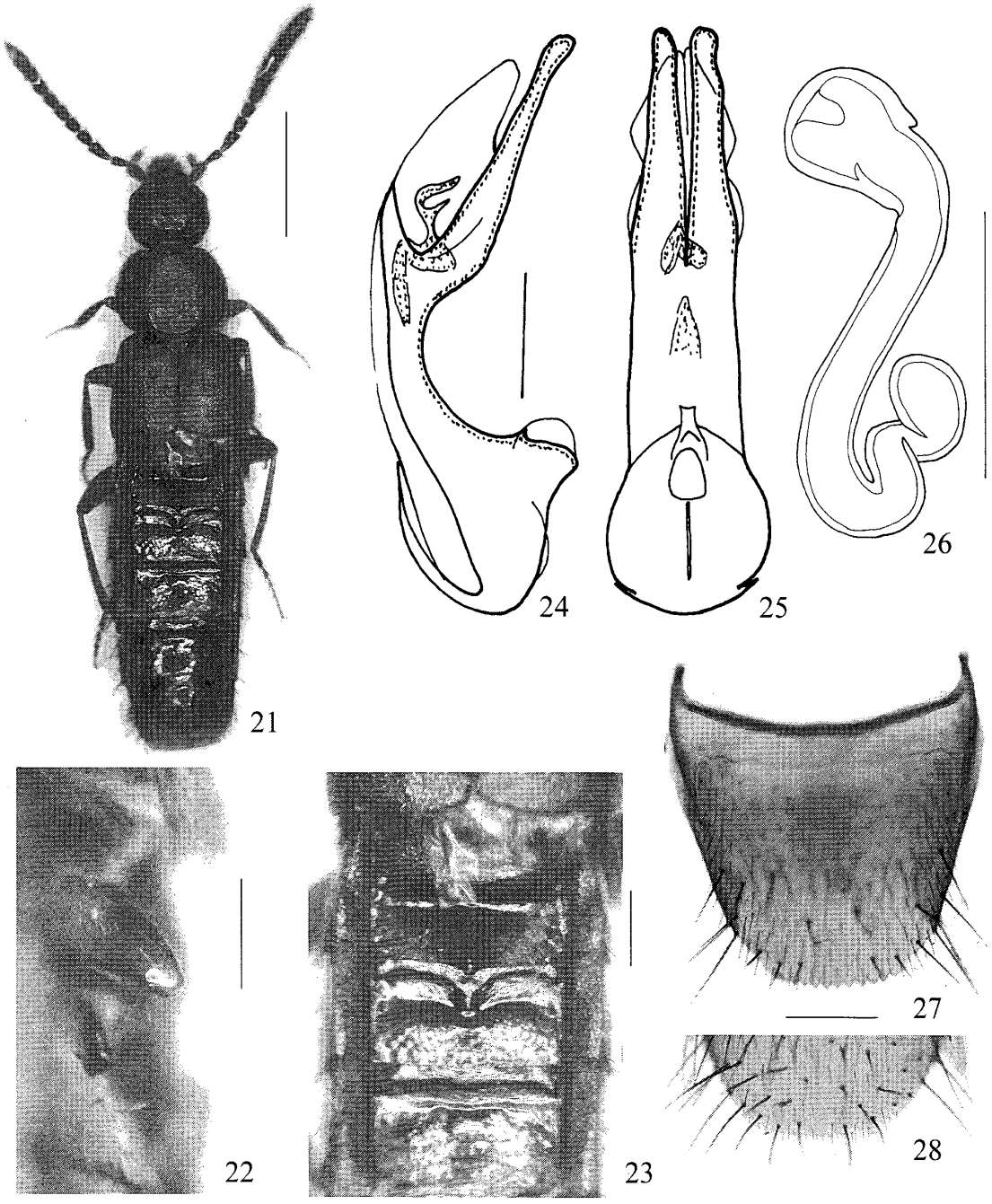
(Figs. 29–36, Map 1)

Type series. Holotype ♂ [teneral]: "Hirogawara, Mt Shirane [=Hirogawara, Ashiyasu-mura, Nakakoma-gun], Yamanashi-ken, Naomi coll." / "Holotypus ♂ *Nepalota rectisulcata* sp. n. det. V. Assing 2003" (NSMT). Paratypes: 2♂♂, 5♀♀ [6 teneral]: same data as holotype (cNao, cAss). (Paratypes are also deposited in the CBM.)

Description. Externally highly similar to *N. angusticavata* (Fig. 29), but distinghished as follows:

Pronotum relatively larger and more transverse, approximately 1.40 times as wide as head and 1.25 times as wide as long, and with finer puncturation (Fig. 29); elytra as short as in *N. angusticavata*.

♂: pronotum with narrow and very shallow median impression (Fig. 29); tubercle of tergite III relatively weakly pronounced, weakly erect, and apically less acute (Fig. 30); tergite IV unmodified (Fig. 30); tubercle of tergite VII weakly developed; tergite VIII not distinctly serrate (Fig. 34); sternite VIII not distinctive (Fig. 35); medi-



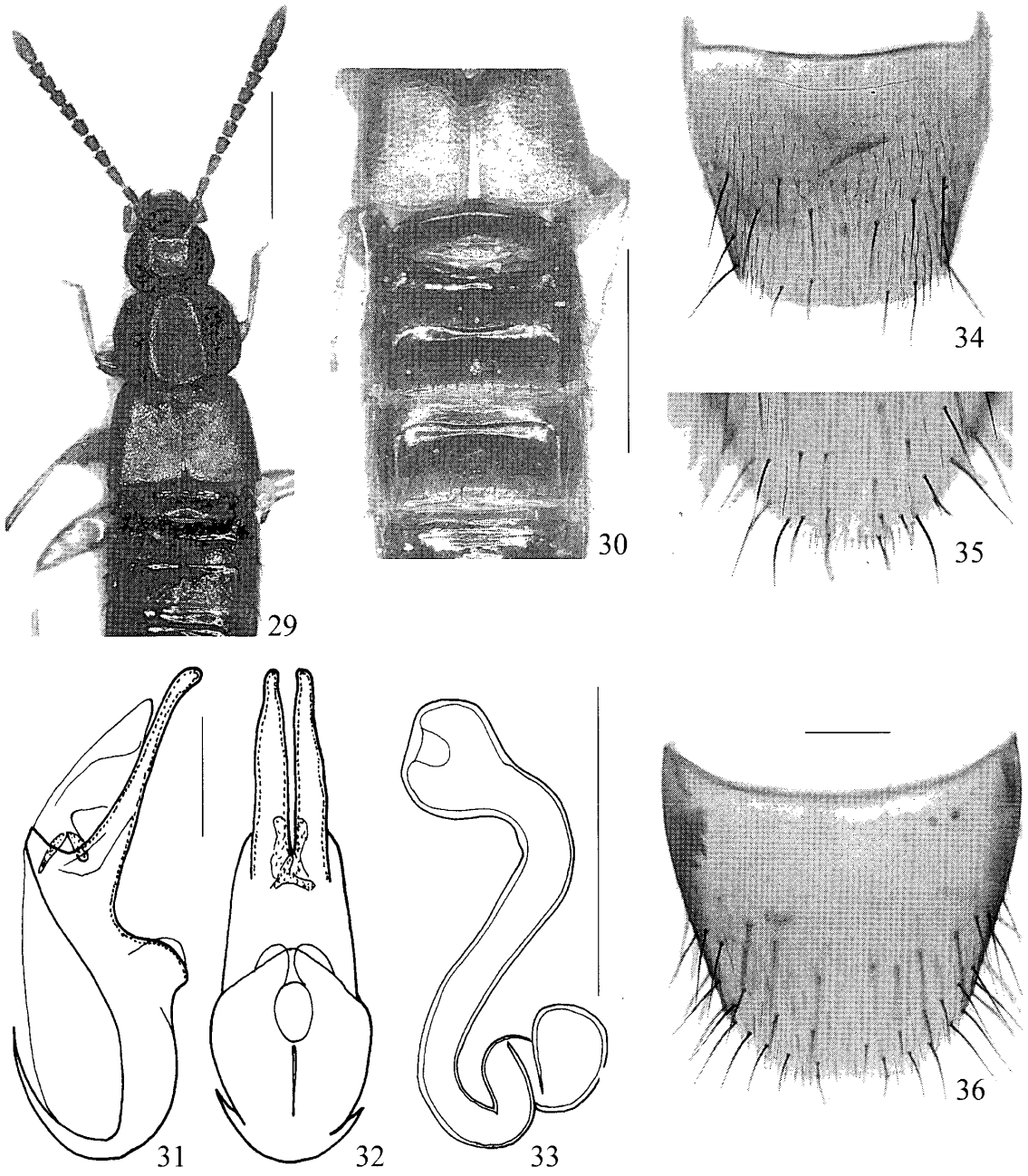
Figs. 21–28. *Nepalota laticavata* sp. nov.: facies, ♂ (21); ♂ abdominal tergites III and IV in lateral view (22); anterior part of ♂ abdomen in dorsal view (23); median lobe of aedeagus in lateral and in ventral view (24, 25); spermatheca (26); ♂ tergite VIII (27); posterior part of ♂ sternite VIII (28). Scales: 21: 1.0 mm; 22–28: 0.2 mm.

an lobe of aedeagus large, in lateral view at base of ventral process not distinctly excavate (Figs. 31?32).

♀: tergite and sternite VIII not distinctive (Fig. 36); spermatheca as in Fig. 33.

Comparative notes. From other species of the genus, *N. rectisulcata* is distinguished by the relatively large pronotum, the weakly pronounced male secondary sexual characters (especially the unmodified tergite IV), by the shape of the median lobe of the aedeagus (especially in lateral view), and by the long thin duct of the spermatheca.

Etymology. The name (Lat., adj.: with a



Figs. 29–36. *Nepalota rectisulcata* sp. nov.: facies, ♂ (29); anterior part of ♂ abdomen in dorsal view (30); median lobe of aedeagus in lateral and in ventral view (31, 32); spermatheca (33); ♂ tergite VIII (34); posterior part of ♂ sternite VIII (35); ♀ sternite VIII (36). Scales: 29–30: 1.0 mm; 31–36: 0.2 mm.

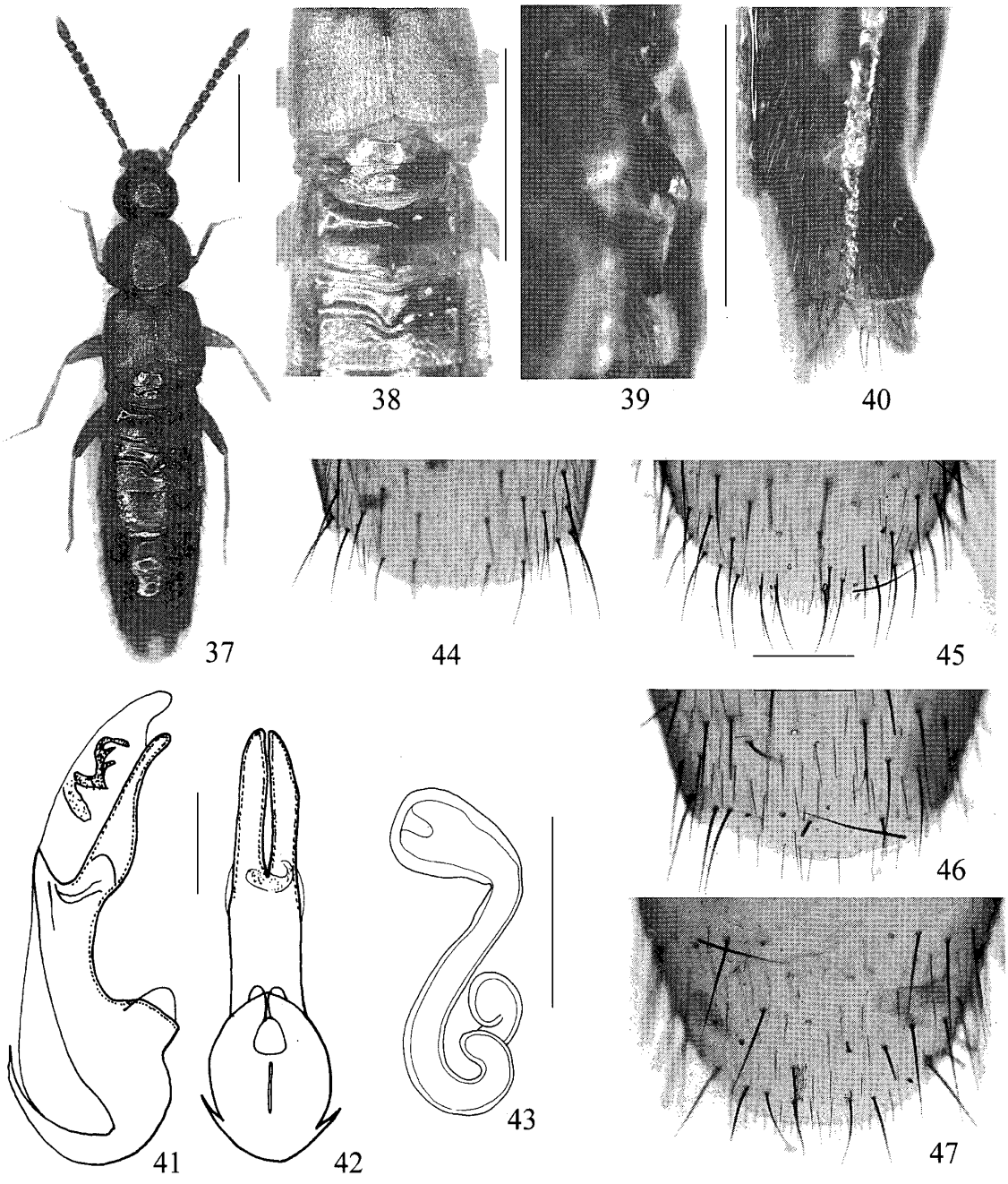
straight furrow) refers to the distinctive unmodified male tergite IV.

Distribution and bionomics. The species is known only from one locality in Honshû (Map 1). Most of the type specimens are teneral.

Nepalota naomii sp. nov.

(Figs. 37–47, Map 1)

Type specimens. Holotype ♂: "Mt. Tsurugi, Tokushima-pref. [=Tsurugi-san, Ichiu-son, Mima-gun, Tokushima-ken], 19~20–VI–1981, S. Naomi leg." (cNao)/"Holotypus ♂ *Nepalota* naomii sp. n. det. V. Assing 2003" (NSMT). Paratypes: 6♂♂, 3♀♀ [partly teneral]: same data

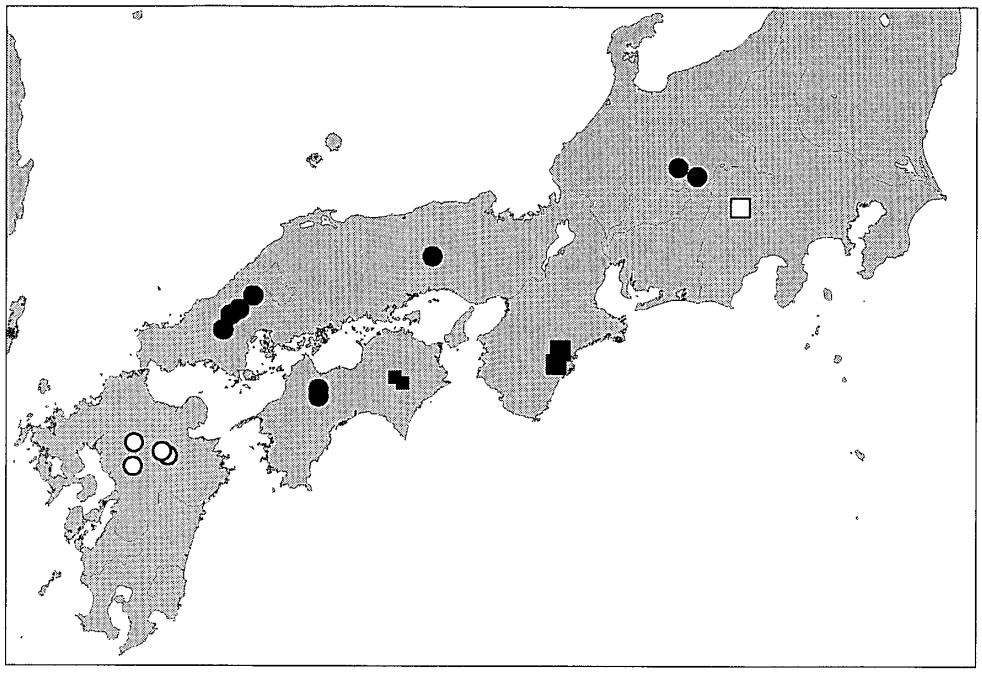


Figs. 37–47. *Nepalota naomii* sp. nov.: facies, ♂ (37); anterior part of ♂ abdomen in dorsal view (38); anterior part of ♂ abdomen in lateral view (39); preapical segments of ♂ abdomen in lateral view (40); median lobe of aedeagus in lateral and in ventral view (41, 42); spermatheca (43); posterior part of ♂ tergite VIII (44); posterior part of ♂ sternite VIII (45); posterior part of ♀ tergite VIII (46); posterior part of ♀ sternite VIII (47). Scales: 37–40: 1.0 mm; 41–47: 0.2 mm.

as holotype. (cNao, cAss); 3♂♂, 13♀♀: same locality and collector as holotype, 15~17–X–1980 (cNao, cAss); 1♀: Minokoshi, Tsurugi-san, Ichiu-son, Tokushima-ken, 6–X–1990, S. Nomura leg. (cNao); 1♂, 1♀ [teneral], Ochiai-tôge, Higashiiyayama-mura Ichiu-son, Tokushima-ken, 18–VI–1981, S. Naomi leg. (cNao). (Paratypes are also deposited in the CBM.)

Description. Externally highly similar to *N. angusticavata* (Fig. 37), distinguished only by the primary and secondary sexual characters:

Pronotum without distinct sexual dimorphism,



Map 1. Known distributions of *Nepalota angusticavata* (filled circles), *N. kyushuica* (open circles), *N. rectisulcata* (open square), *N. laticavata* (large filled squares), and *N. naomii* (small filled squares) in southern Japan. Limits of map: ca. 129°20′E–141°00′E; 30°50′N–37°40′N.

in both sexes usually without median impression (Fig. 37), rarely in males with very weak median impression.

♂: modifications of the male abdominal segments III, IV, and VII similar to those in *N. angusticavata* (Figs. 38–40); posterior margin of tergite VIII not always distinctly serrate (Fig. 44); sternite VIII similar to that of *N. angusticavata* (Fig. 45); median lobe of aedeagus in lateral aspect similar to that of *N. laticavata*, also with very broad excavation, but ventral process apically shorter (Figs. 41–42).

♀: tergite and sternite VIII not distinctive (Figs. 46–47); spermatheca as in Fig. 43.

Comparative notes. Among the Japanese *Nepalota* species, *N. naomii* is characterized by the primary sexual characters, especially the lateral aspect of the median lobe of the aedeagus.

Etymology. The species is dedicated to Dr. Shun-Ichiro Naomi, Chiba, distinguished researcher of the Staphylinidae, who collected a large proportion of the material on which the present study is based.

Distribution and bionomics. The species is known from Tokushima-ken in Shikoku (Map 1). Teneral specimens were collected in June.

Key to the Species of *Nepalota* of Japan

As emphasized in the diagnoses above, a reliable identification based on non-sexual characters is problematic or even impossible, and in most cases the female primary and secondary sexual characters are not very distinctive either. Therefore, the key mainly relies on the morphology of the anterior tergites of the male abdomen and especially the shape of the aedeagus. When using the key, the reader should be aware that the known species inventory of Japanese *Nepalota* is probably incomplete.

1. ♂: abdominal tergite IV with anterior margin of anterior impression not distinctly angulate (V-shaped) in the middle (Fig. 30); median lobe of aedeagus in lateral view not distinctly excavated at base of ventral process (Figs. 31–32). ♀: spermatheca with relatively long and slender duct (Fig. 33). Pronotum relatively large (Fig. 29). Honshu. . . . ***N. rectisulcata***

— ♂: abdominal tergite IV with anterior margin of anterior impression distinctly angulate (V-

shaped) in the middle (e.g., Fig. 23); median lobe of aedeagus in lateral view distinctly excavated at base of ventral process. ♀: spermatheca usually with shorter and stouter duct. Pronotum more slender 2

2. ♂: median lobe of aedeagus in lateral view with very broad excavation (Figs. 24, 41) 3

— ♂: median lobe of aedeagus in lateral view with less broad excavation (Figs. 3, 13) 4

3. ♂: ventral process of aedeagus (lateral view) longer (Figs. 24, 25). ♀: spermatheca as in Fig. 26. Elytra on average larger and longer (Fig. 21). Coloration usually darker. Honshu. . . . . ***N. laticavata***

— ♂: ventral process of aedeagus (lateral view) shorter (Figs. 41–42). ♀: spermatheca as in Fig. 43. Elytra on average shorter (Fig. 37). Coloration usually lighter. Shikoku. . . . . ***N. naomii***

4. ♂: median lobe of aedeagus in lateral view with longer ventral process and more deeply excavated at base of ventral process (Figs. 13–16); tubercle of tergite III more erect and apically obliquely truncate (Fig. 12); tergite VIII posteriorly distinctly truncate (Fig. 18). ♀: spermatheca as in Fig. 17. Kyushu. . . . . ***N. kyushuica***

— ♂: median lobe of aedeagus in lateral view with shorter ventral process and less deeply excavated at base of ventral process (Figs. 3, 4); tubercle of tergite III more erect and apically obliquely truncate (Fig. 2); tergite VIII posteriorly distinctly truncate (Fig. 17). ♀: spermatheca as in Fig. 5. Honshu, Shikoku. . . . . ***N. angusticavata***

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